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International Young Scientists' perspective on global change issues

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On November 5–8, 2006, the 2nd International Young Scientists' Global Change Conference took place at the Science and Technology building of the China Meteorological Administration in Beijing, China. The conference was endorsed by the Earth System Science Partnership and was organized by START (the global change SysTEM for Analysis, Research and Training) and the China Meteorological Administration.

A group of 100 young scientists were selected by international review panels from over 700 applications to participate in the conference. Different disciplines, methodological approaches, and cultural backgrounds had the opportunity to communicate, providing an excellent overview of the advances and challenges in global change science. The conference offered all participants a prestigious platform to present

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their current research to each other and to leading scientists in the different fields of global change research. It also fostered professional and institutional networks and seeded new ideas, hypotheses and approaches that will certainly impact the work of the new generation of global change researchers.

This special edition features a selection of papers authored by participants of the Young Scientists' Global Change Conference. It represents the efforts of a new generation of global change scientists. Less than 35 years of age, they work in a variety of environments—some in developed country universities, others in developing country institutions; some are part of large international teams, others work essentially by themselves. They do not hesitate to cross boundaries of nationality or disciplinary training, and are taking on some of the burning questions in global change science.

The table of contents reflects the wide range of research topics, geographical coverage, and methodological approaches in the papers presented at the conference. The papers address cross-cutting issues in earth system vulnerability, looking at climate change in conjunction with biodiversity loss and desertification, as well as evaluating adaptation options along with mitigation strategies. The papers included in this special issue model climate variability and change (Islam et al. 2009), and study the impacts of such changes on the cryosphere (Arigony-Neto et al. 2009; Haritashya et al. 2009), terrestrial ecosystems (Cui and Graf 2009; Nogué et al. 2009; Parker-Allie et al. 2009; Wang et al. 2009; Wipf et al. 2009), agricultural systems (Meza and Silva 2009; Sultana et al. 2009), and coastal communities (Badjeck et al. 2009; Sharma et al. 2009). They go on to explore response strategies from the individual to the national level—farm-level adaptation (Meza and Silva 2009), forest sequestration policies and incentives (Han and Youn 2009), and renewable energy use (Urban et al. 2009).

At a time when the IPCC Fourth Assessment Report points out “a notable lack of geographic balance in data and literature on observed changes, with marked scarcity in developing countries” (IPCC 2007), these papers aim to improve our understanding of global change around the world. They provide further knowledge about impacts and coping strategies, vulnerable sectors, and communities in developing countries. In Africa, the papers document desertification and ecosystem changes; in South America, this issue focuses on biodiversity loss in Venezuela, agricultural adaptation in Chile, and artisanal fisheries in Peru; in Asia, this issue presents cyclone preparedness in India, climate extremes and their effects on agriculture in Pakistan, renewable energy use in China, land cover changes in Tibet, forest management in Korea, and glacier retreat in Afghanistan.

The conference that brought these young researchers together and enabled this special edition would not have been possible without the tremendous commitment and support by a great many people and organizations. We are especially grateful to: Roland Fuchs and Hassan Virji of START, who initiated the conference and secured its funding. Prof. Peter Tyson, who chaired the organizing committee; Gordon McBean and Graeme Pearman, the Co-Chairs of the START Scientific Steering Committee; the China Meteorological Administration in Beijing, which generously hosted the event, and its staff including Qin Dahe, Sun Rui and Chen Zhenlin; Amy Freise, Sandy Stowe, Katherine Landauer and the rest of the team at the International START secretariat, who handled all the logistics and got everyone to the conference. We are also grateful to the keynote speakers of the conference, Congbin Fu and Nobel Laureate Paul Crutzen, and to the members of the global

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